

***Callistemon* of New Caledonia transferred to *Melaleuca* (Myrtaceae)**

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ABSTRACT

The endemic New Caledonian taxa of *Callistemon* (five species and one nonautonymic variety) are transferred to *Melaleuca*. An identification key for the New Caledonian taxa of *Melaleuca* is presented.

MOTS CLÉS

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RÉSUMÉ

Les cinq espèces de *Callistemon* endémiques de Nouvelle-Calédonie sont transférées dans le genre *Melaleuca*. Une clé des *Melaleuca* néo-calédoniens est proposée.

Callistemon R. Br. conventionally has been separated from *Melaleuca* L. on the basis of the former genus having the stamens dispersed around the hypanthium apex and free staminal filaments whereas in *Melaleuca* the stamens are in five groups opposite the petals and the filaments within each group fused proximally for part, sometimes the greater part, of their length. The occurrence of 5-grouped, fused stamens in *Callistemon* has been long known, e.g. BENTHAM (1867) recorded this condition in the Western Australian *C. glaucus* (Bonpl.) Sweet (as *C. speciosus* DC.). More recently, BYRNES (1984) transferred the eastern Australian *C. viminalis* (Sol. ex Gaertner) G. Don ex Loudon to *Melaleuca* on the basis that this species has its stamens in bundles (i.e. 5-grouped and fused).

Eight species of the *Melaleuca-Callistemon* complex occur in New Caledonia (DAWSON 1992) with seven of them endemic and, of the five species attributed to *Callistemon*, two have the stamens in bundles, i.e. *C. buseanus* Guillaumin and *C. gnidioides* Guillaumin (the latter variably so, the stamens ranging from free to 5-grouped and fused). In addition, adjacent stamens occasionally may be fused at the filament base in *C. brevisepalus* J.W. Dawson and *C. suberosus* Pancher ex Brongn. & Gris. Due to their many shared features, DAWSON (1978) previously had given a combined generic description of *Melaleuca* and *Callistemon* in New Caledonia.

In view of the morphological similarities between the endemic New Caledonian species of the complex there is no doubt that these belong to the same genus. They may well be related to some of the eastern Australian species of *Melaleuca*, notably to *M. styphelioides* Sm. and its closer relatives; these species in particular have quite similar leaves to several of the New Caledonian species. The Australian species of *Callistemon* are not especially closely related to the New Caledonian taxa and are presently being studied by L.A.C. as part of a broader project dealing with *Melaleuca*. The New Caledonian group of species, in our opinion, fits comfortably within *Melaleuca* and the necessary transfers of the six taxa currently ascribed to *Callistemon* are effected below.

The non-endemic New Caledonian species,

Melaleuca quinquenervia (Cav.) S.T. Blake, occurs in New Guinea and Australia also (BLAKE 1968; CRAVEN in press); it is a member of the broad-leaved group of paperbarks centred upon *M. leucodendra* (L.) L., the type species of *Melaleuca*.

***Melaleuca dawsonii* Craven, nom. nov.**

Callistemon suberosus Pancher ex Brongn. & Gris, Bull. Soc. Bot. France 11: 183 (1864).—Lectotype: *Pancher s.n.*, 1861 (P!), designated by DAWSON, Fl. Nouvelle-Calédonie et dépendances 18: 230 (1992).

Unfortunately, the specific epithet "*suberosa*" is pre-empted in *Melaleuca* by *M. suberosa* (Schauer) C.A. Gardner and a new epithet is required in that genus. The new epithet provided above honours John Wyndham DAWSON, who has researched New Caledonian Myrtaceae for many years and co-authors this contribution.

***Melaleuca pancheri* (Brongn. & Gris) Craven & J.W. Dawson, comb. nov.**

Callistemon pancheri Brongn. & Gris, Bull. Soc. Bot. France 11: 183 (1864).—Lectotype: *Deplanche 513* (P!), designated by DAWSON, Fl. Nouvelle-Calédonie et dépendances 18: 234 (1992).

Callistemon suberosus var. *microphyllum* Guillaumin, Mém. Mus. Natl. Hist. Nat. Paris 8: 277 (1962).—Type: *Hürlimann 1389* (holo-, P!).

***Melaleuca buseana* (Guillaumin) Craven & J.W. Dawson, comb. nov.**

Callistemon buseanum Guillaumin, Bull. Mus. Natl. Hist. Nat. 11: 414 (1939).—Type: *Viroi s.n.* (holo-, P!).

Callistemon buseanum var. *longifolium* Guillaumin, Mém. Mus. Natl. Hist. Nat. Paris 8: 276 (1962), nom. inval. (Type not designated).

***Melaleuca sphaerodendra* Craven & J.W. Dawson, nom. nov.**

Callistemon gnidioides Guillaumin, Bull. Soc. Bot. France 81: 6, 12 (1934).—Type: *Cribs 1213* (holo-, P!).

A new specific epithet is required as "*gnidioides*" is pre-empted in *Melaleuca* by *M. gnidioides* Brongn. & Gris. The epithet selected is derived from the Greek *sphaera* (ball, sphere) and *dendron* (tree) in reference to the shape of the crown in many plants of this species. Two varieties are distinguished:

Melaleuca sphaerodendra* var. *sphaerodendra

Melaleuca sphaerodendra* var. *microphylla
(Viro) Craven & J.W. Dawson, **comb. nov.**

Callistemon gnidioides var. *microphyllum* Viro, Mém. Mus. Natl. Hist. Nat., ser. B, Bot. 4: 30 (1953).—Type: *Viro 1313* (holo-, P!).

Melaleuca brevisepala* (J.W. Dawson) Craven & J.W. Dawson, **comb. nov.*

Callistemon brevisepalus J.W. Dawson, Fl. Nouvelle-Calédonie et dépendances 18: 242 (1992).—Type: *MacKee 39344* (holo-, P!).

Key to the New Caledonian species of *Melaleuca*

- 1. Leaves 8 mm or more wide 2
- 1'. Leaves 6 mm wide or less 4
- 2. Inflorescences spicate, the groups of flowers or capsules separated by well-marked internodes ***M. quinquenervia***
- 2'. Inflorescences capitate, the flowers or capsules densely aggregated and not separated by well-marked internodes 3
- 3. Leafy twigs 8-11 mm in diameter ***M. dawsonii***
- 3'. Leafy twigs 2.5-3.5 mm in diameter ***M. pancheri***
- 4. Inflorescences spicate, the groups of flowers or capsules separated by well-marked internodes ***M. buseana***
- 4'. Inflorescences capitate, the flowers or capsules densely aggregated and not separated by well-marked internodes 5
- 5. Stamens 25 or more per flower, fused at the base in 5 groups. (Shrubs in the far south, mostly in stream beds or swamps) 6
- 5'. Stamens 12 or fewer per flower, free or slightly fused at the base in 5 groups. (Shrubs to small trees with dense rounded crowns, on well-drained slopes in the north and south) 7
- 6. Leaves with evident parallel veins ***M. gnidioides***
- 6'. Leaves with obscure parallel veins ***M. brongniartii***
- 7. Stamens longer than the style, capsule glabrous 8
- 7'. Stamens shorter than the style, capsule densely pubescent ***M. brevisepala***
- 8. Leaves 3.5-5 mm wide ***M. sphaerodendra* var. *sphaerodendra***
- 8'. Leaves 2-3 mm wide ***M. sphaerodendra* var. *microphylla***

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